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ABSTRACT

This qualitative case study explores the influences of sustained discourse across disciplines on college faculty attitudes and behaviors related to scholarship and intellectual interaction. The study, conducted at Emory University (Georgia), involved 25 faculty who had participated in a series of semester-long seminars that explored topics of common concern among university faculty. The sample reflected various departments, disciplines, ranks, and experience (excepting the business school). Participants were asked semistructured, open-ended questions concerning the general nature of the seminar experience, positive and negative features of the seminars, and ways in which the seminars might have been improved, as well as questions about what influence the seminars had on participants' interactions with other faculty members and on their ties to the university. It was concluded that the seminar series expanded the intellectual horizons of all participants by providing a model for interdisciplinary discourse and encouraging exploration of different approaches to knowledge and truth. The program also built a reservoir of good will that enabled participants to engage in unfamiliar and difficult discourse. Many participants also developed a wider and warmer view of the university as more than a collection of disparate parts, and for many the seminar helped mitigate feelings of intellectual or physical isolation. (Contains 46 references.) (CH)

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Distances between Disciplines: Influences of Interdisciplinary Discourse on Faculty Scholarship and Interaction at One University

Susan H. Frost and Paul M. Jean
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Abstract. This qualitative case study explores the influences of a program of sustained discourse across disciplines on faculty attitudes and behaviors related to scholarship and intellectual interaction at Emory University. The study revealed that many participants developed new approaches for teaching and research that spanned disciplinary perspectives, enhanced their interaction with and appreciation of colleagues from other disciplines, and gained a renewed sense of the university as the location for their scholarly endeavors. While some cultural fault lines remained, the program seemed to tap into symbolic and affective elements of faculty culture that helped mitigate the effects of disciplinary isolation and create a sense of coherent intellectual community.

"It was very rich . . . [and] intellectually stimulating. . . . It rekindled a kind of intellectual curiosity [that] ...can be atrophied over time because of [the] lack . . . of incentives to use it. . . . It felt like ideas were important . . . for their own sake. . . . It was what I had always thought the university was about."

-A faculty member in the health sciences

"The Luce Seminar is . . . almost like a hub, the spokes coming out, so many different things going on, and each one touches an important aspect of what Emory is about."

-A faculty member in the social sciences

The continuing growth of disciplinary specialty in higher education underscores the need to find meaningful ways to link the disparate and sometimes isolated spheres of faculty life. For some leaders and scholars, increasing disciplinary specialization threatens to dilute the rich, local interaction that supports scholarly vitality. Yet the idea of lively and genuine scholarly exchange among colleagues in a university is far from ivy-colored nostalgia. Recent research suggests that intellectual interaction across the boundaries that contain faculty is crucial to both the ability of scholars to address wide-ranging societal problems and the caliber of solutions they pose, as well as the quality of academic life (Benson, et al., 1996; Boyer, 1990, 1997; Hollingsworth, 1996; Rice, 1996).

Assuming that such interaction contributes to the quality of scholarly work, the research university we investigated initiated an eight-year program of in-depth discourse among faculty members from a wide variety disciplines. In a previous analysis, we examined some ways the program supported intellectual exchange and community (Frost and Jean, 1999). In this qualitative analysis, we seek to gauge the potential breadth and depth of influence from participation in sustained interdisciplinary discourse on the ways faculty members think, work, and interact. We investigate how the program affected the attitudes and behaviors of its participants in relation to their scholarly activities, intellectual interaction across disciplines, and the university as the location for their scholarly endeavors. We pay particular attention to the ways that the program may have helped bridge distances and enhance intellectual community for

HE 032 690

its participants. Some aspects of academic culture and disciplinary specialization are likely to impact all such programs.

Academic Culture and Disciplinary Specialty

Recently scholars have emphasized the need to understand the various dimensions in the culture of the academy that shape faculty attitudes and behaviors (Astin, 1990; Cameron and Ettington, 1988; Clark, 1983, 1987; Dill, 1991; Peterson and Spencer, 1990; Tierney and Rhoads, 1994). These cultural dimensions include both explicit and implicit patterns of meanings, beliefs, symbols, and behaviors. Affective and symbolic bonds among groups often underlie such patterns, "despite elaborate pretensions to the contrary" (Clark, 1983, p. 74). Within faculty life, intellectual, affective, and symbolic meanings coalesce around various points of convergence and tension.

Some scholars have described distinct patterns of attitudes, meanings, and behaviors related to disciplines, institutions, the profession, and national systems (Astin, 1990; Clark, 1983; Dill, 1991; Tierney and Rhoads, 1994). These various aspects of culture within higher education exert powerful influences on faculty. In the United States, attitudes and behaviors related to disciplinary orientation seem to dominate faculty culture (Clark, 1983). The culture of the discipline consists of a "knowledge tradition" that includes categories of thought, a common vocabulary, and related codes of conduct. The culture of the institution surrounds individual colleges and universities, generating loyalty through symbols of community and unity while permitting various subcultures to flourish. The culture of the profession sweeps across all disciplines and institutions, providing the basis for participation in and orientation towards a single "community of scholars." As Metzger (1987) has observed, many scholars have not been able to clearly delineate how these cultures clash, intersect, divide or mutually reinforce faculty work.

Many believe that over-emphasizing disciplinary expertise may reduce rich, local intellectual interaction, diluting the coherence of academic culture (Astin, 1990; Barnett, 1994; Becher, 1987, 1994; Bender, 1993; Boyer, 1990, 1997; Clark, 1983; Damrosch, 1995; Dill, 1991; Kerr, 1982; Ochs, 1984; Tierney and Rhoads, 1994). In the United States, the expansion of higher education into a national system of disciplines that began in the late 19th century exploded during the 20th century. The demand for new knowledge created by post-WWI industrialization and post-WWII economic and technological expansion fueled the development of disciplinary professional expertise (Bender, 1998; Geiger, 1986, 1993). At a research university in particular, the "isolated individual" star scholar reigns as the desired norm. Because research universities serve a dual mission of supporting sponsored research and liberal teaching, they are particularly susceptible to tensions that occur between specialized knowledge production and maintaining a viable intellectual community (Damrosch, 1995; Geiger, 1993; Ruscio, 1987). Moreover, the continued proliferation of specialty areas may require developing new mechanisms for intellectual exchange aimed at integrating knowledge across fields (Bellah, 1996; Boyer, 1990; Geiger, 1993).

Thus, for some, disciplinary specialization can dampen the sense of shared purpose idealized in John Henry Newman's nineteenth-century vision of university life experienced through "familiar discourse" (Astin, 1990; Barnett, 1994; Damrosch, 1995; Dill, 1991; Kerr, 1982; Ochs, 1984; Newman, 1996; Tierney and Rhoads, 1994). In the mid-20th century, such a vision found sympathy in Robert Maynard Hutchins' (1968) belief that the larger purpose of a

university was to "see knowledge, life, the world, or truth whole" (p. 108). Hutchins (1995) saw the common aim of university life not in academic specialization that serves external demands for empirical knowledge but in "the pursuit of truth for its own sake" (p. 95). He believed that such pursuit could not take place in any meaningful way except in the context of rich, local interaction. More recently, scholars have observed that the rise of the "multiuniversity" consisting of disciplines, departments and schools hinders rich, local interaction and that the norm of individual disciplinary expertise weakens faculty commitment toward shared beliefs (Dill, 1991; Kerr, 1982). Though higher education seeks to "unify and renew itself," it apparently "does not yet know how" (Metzger, 1987, p. 178).

Faculty seem to experience a diminished sense of intellectual community in two distinct but related ways (Barnett, 1994). The first involves the decline of faculty contact across disciplines at the local institution. The second concerns the fragmentation of communication accompanying the disciplinary specialization (Clark, 1983; Becher, 1987). Communication between faculty members becomes more difficult as disciplines expand and rely on increasingly complex contents and methodologies. Disciplines now display considerable variation in their approaches to knowledge paradigms, theories, methods, and styles of discourse. Clark (1983) observed that a "common vocabulary" which is "increasingly so arcane that outsiders find it mystifying and call it jargon" lies at the core of each disciplinary culture (p. 79). Moreover, many faculty members only vaguely sense the cultural and intellectual foundations of their own disciplines. Thus, the uncertainty of venturing into new territories of discourse can be daunting, raising levels of anxiety and defensiveness (Armstrong, 1980). Negative stereotypes about other disciplines seem to stem from ignorance and intolerance (Becher, 1994). Valuable intellectual exchange among faculty thus requires learning about the differences between disciplinary orientations and developing a mutual sense of respect and tolerance.

Differences between disciplinary cultures generally coalesce around several styles of inquiry, such as realism and relativism (Becher, 1987, 1995). The realist view stresses the independent nature of knowledge, evidence, and the demonstrability of valid findings. The relativist view emphasizes the nature of argument, persuasion, and ideology in relation to intellectual communities. Various groups of disciplines approach knowledge in different ways. The pure sciences treat knowledge as quantitative and cumulative, the humanities and soft social sciences as reiterative and pluralist, the hard social sciences as functional and utilitarian, and the applied or technical disciplines as purposive and pragmatic. Thus, the humanities tend to be concerned with particulars or complication and interpretation, the pure or natural sciences with universals and simplification, and the applied or technical sciences with know-how and mastery. The social sciences occupy the middle range between generalized, realist modes of empirical inquiry and particularized, relativist modes of empirical inquiry. Although understanding disciplinary cultures helps us understand faculty attitudes and behaviors, these cultures are not "monolithic" but subject to constant reconstruction (Becher, 1995). Moreover, both realist and relativist approaches to empirical truth can coexist meaningfully if social and cultural barriers preventing communication and understanding are transcended.

Another important distinction between disciplinary cultures concerns the professional and the arts and sciences disciplines (Becher, 1995; Bok, 1986; Clark, 1983, 1987; Halpern, 1987). Professional schools combine practical and academic missions, reflecting a stronger orientation toward educating students for professional occupations than do the arts and sciences. Yet within the academy, scholars value inquiry that is "abstract, theoretical, or interesting for its own sake," sometimes assigning less status to work that has "immediate, practical utility" (Bok, 1986, p.77).

Because the arts and sciences have been long considered the heart of true scholarship, professional school faculty members sometimes question their status. They sometimes seek to establish their reputation as more than mere "trade school teachers" by signaling their respect for abstract and theoretical scholarly values (Bok, 1986, p.78). Ironically, those outside academia tend to value precisely the kind of knowledge inquiry undertaken by the professional schools and question the "pure" academic inquiry in the arts and sciences. While highly valued in the "external" hierarchy outside academia, professional school faculty members are often perceived as lower in the "internal" status hierarchy (Becher, 1995).

Faculty perceptions of the differences among disciplines may also reflect boundary maintenance strategies. Following Durkheim's (1912/1965) functional view of culture, some social scientists have described how groups use cognitive and symbolic classifications to organize themselves in patterns of hierarchy or opposition in order to maintain group unity (Douglas, 1966; Erickson, 1966; Lamont and Fournier, 1992). Groups or communities develop boundaries as they seek to clarify their niche in cultural space. These boundaries serve as meaningful reference points for group members and often take the form of an ethos that is frequently tested and defended. As Douglas (1966) observed, attaching notions of pollution and purity to groups of people or their behaviors helps legitimate boundaries that maintain the cultural unity in social experience. Beliefs about pollution and purity express views of the social order through a "dialogue of claims and counter-claims to status" (Douglas, 1966, p. 3). These cognitive and symbolic boundary mechanisms may help explain attitudes of hierarchy, exclusion, envy and resentment among faculty members about various disciplines and disciplinary groups.

Thus, we expect that variations in attitudes and stereotypes surrounding disciplinary orientations may shape what faculty members might take away from programs of sustained intellectual discourse across disciplines. Several other factors may play a role also. Although little exists in the literature about the influences on faculty from participation in such programs, many have noted how variation in faculty seniority levels may affect the benefits from faculty programs (Centra, 1989; Baldwin, 1990). Orientations toward scholarly and career priorities differ between junior and senior faculty. Some evidence also indicates that programs that emphasize traditional academic values and identification with local academic community help support faculty vitality and scholarly commitment (Bland and Schmitz, 1990). Armstrong (1980) noted that individual differences among faculty also affect what participants might take away from programs involving interaction across disciplines. These differences include levels of ego strength, tolerance for ambiguity, assertiveness, and the desire to move beyond disciplinary constraints. However, programs that provide empathetic peer support for common intellectual tasks and emphasize simultaneous learning and teaching often result in positive outcomes regardless of individual personality and learning style differences.

Case Study Background

A Research I university located in the southeastern United States, Emory University is comprised of an undergraduate college and a graduate school of arts and sciences and professional programs in business, law, theology, medicine, nursing and public health. At the time the Luce Seminars were planned, Emory had embarked on a period of ambitious growth fueled by a substantial monetary gift and the vision of its president, James T. Laney. To increase the quality and intensity of scholarship among its faculty, the university began to add new faculty

and to increase support for research. From 1978 to 1993, when President Laney left office, research support had increased by over 450 percent while the number of faculty increased by fifty percent. Enrollment in 1998 consisted of 11,353 students divided evenly between undergraduate and graduate programs. Faculty at the university numbered about 2500 with about three-quarters holding full-time, permanent positions.

Concerned that Emory's rapid growth might increase intellectual distances among faculty, Laney sought ways to strengthen connections across the university. During the mid-1980s, a group of faculty and administrative leaders at Emory University designed a program aimed at establishing a framework for intellectual discourse across a wide variety of disciplines. Archival documents reveal their intent to both sustain conversation across disciplinary boundaries and to enrich the breadth of scholarship. In the program's original proposal, Laney imagined that the discourse would illuminate some "values and assumptions" that underlie the "broader purposes of education with a university." Under Laney's vision, the designers aimed at generating "a community of discourse" that would balance the increasing weight of academic specialization and departmental isolation. They feared that the tendency to specialize had "created ever more penetrating and elegant systems of thought and discourse that are also ever more isolated." The proposal further declared that "universities today are collections of disciplines and sub-disciplines, each pursuing their own kinds of knowledge, carelessly assuming that some invisible hand of wisdom will shape the whole into intelligible patterns."

With partial funding from a Henry Luce Foundation grant, the program took shape as a series of semester-long seminars exploring broad topics of common concern. A total of eighty-five participants took part in the seminars, which were held each spring semester from 1989 to 1996. Between nine and twelve faculty members from various disciplines participated in each seminar. They agreed to read broadly on a seminar topics of common concern and convened twice weekly for discussion. Participation required the expectation of departmental or school release from teaching responsibilities for the semester. In the majority of cases, departments or schools provided this release. In some cases, however, departments substituted release from committee work or other assignments. In a few cases, participants received no release time.

The university invited theologian James M. Gustafson to direct the program and lead the seminars, naming him to the university-wide post of Henry R. Luce Professor. At the time of the invitation, he had served on the faculties of both Yale University and the University of Chicago and had extensive experience in leading interdisciplinary dialogues among colleagues in science, law, literature, and the social sciences. In addition, he had served as a founding member of a center for bioethics and gained broad experience in business ethics.

Gustafson structured readings and discussion around themes such as "nature" and "responsibility." Beginning many months before the start of each seminar, he gathered numerous suggestions for readings from each participant, read each volume, and selected the most appropriate materials. He then sequenced them in order to build a coherent framework for discussing each seminar's theme. The syllabus required that each participant make a presentation about a reading in a discipline other than her or his own. A critical response from an expert in the field and general discussion ensued. A graduate student recorder took notes and circulated session summaries.

In the year following the completion of the program, we began a comprehensive exploration of the nature of the experience for its participants. We examined the program's influences on various aspects of intellectual community and scholarship. Following each seminar, Gustafson had invited each participant to correspond or meet with an administrative

third party to evaluate the seminar. He used this information to submit annual reports. Despite consistently high ratings by the majority of the participants, Gustafson's final report revealed some concern about how the university might learn about the program's long-term influence on the participants, as well as on the collective life of the university. This concern, along with the continued availability of over 90 percent of the program's participants, provided the impetus for the study.

Research Questions

Our previous work revealed the general success of the Luce program as a framework for fruitful discourse across disciplines over the eight-year duration of the program. In this analysis, we seek to gauge the potential breadth and depth of influence from participation in sustained interdisciplinary discourse on the ways faculty members think, work, and interact. We investigate how the program affected participants' attitudes and behaviors related to their scholarly activities, intellectual interaction across disciplines, and the university as the location for their scholarly endeavors. We pay particular attention to the ways that the program might have helped bridge distances between disciplines and enhance intellectual community for its participants. We address the following questions:

- How did the program influence participants' attitudes and behaviors related to their scholarship and professional work? In what ways did the program affect their orientation toward their teaching, research, academic service, and career?
- How did the program influence participants' attitudes and behaviors related to intellectual and social interaction with their colleagues at the university? In what ways did the program affect their contact with faculty members from other disciplines and their orientation to their own disciplines, other disciplines, and the value of interdisciplinary discourse?
- How did the program influence participants' attitudes and behaviors related to the university as the location for their scholarly and professional endeavors? In what ways did the program affect their view of and attachment to the university?

Because program designers sought to bridge some cultural fault lines within faculty life, we place our analysis in the context of the program's potential to provide some foundation for intellectual interaction across disciplines and add to the coherence of intellectual life at Emory. We also focus on the ideas and symbols explicit or implicit in faculty culture that helped shape the program's outcome.

Research Design

Scholars in higher education lack sufficient information to gauge the effect of programs of sustained interdisciplinary intellectual discourse on faculty scholarship and interaction. Because this seminar series occurred in one unique institution over a fixed period of time, we used a qualitative case study design to explore the nature of the experiences of its participants (Merriam, 1998; Yin, 1994). It is particularly appropriate to rely upon qualitative case studies when there are no previous or clear indicators of programmatic success or when a better understanding of the dynamics of a unique program is sought (Merriam, 1998; Patton, 1990).

Twenty-nine of the 85 faculty members who took part in the Luce Seminars were invited to participate in the study; 25 (86 percent) accepted the invitation. We employed purposive-based criteria to select a sample reflecting the various departments, disciplines, ranks, and

experience of the population of participants across the eight-year span of the program (Merriam, 1998; Patton, 1990). The percentage of males (68 percent) and the percentage of arts and sciences faculty members (64 percent) were somewhat smaller in the sample compared to the study population in order to fully explore the variation of the faculty members by gender and school. The nine (36 percent) professional school faculty members in the sample represented the schools of theology, law, nursing, medicine, and public health. Due to the incomplete response rate, the business school was not represented in the sample.

Following Clark (1983), Becher (1987) and others, our typology of disciplinary groups includes the humanities, social and natural sciences (located in the undergraduate college and graduate school of arts and sciences), and the professional schools (medicine, public health, nursing, law, theology and business). In discussing the findings, we refer to respondents according to their disciplinary groups and assigned gender pronouns randomly to help ensure confidentiality. When appropriate, natural science faculty members in both the arts and sciences and the professional schools are sometimes grouped together. At the time of participation, 84 percent of participants held tenure; 52 percent held the rank of professor; 40 percent, associate professor; 11 percent, assistant professor; and one percent, senior lecturer.

We conducted semi-structured, open-ended interviews of approximately 60 to 90 minutes in length with each of the 25 participants. Based on the purposes of the study, we asked a series of open-ended questions concerning the general nature of the seminar experience, the positive and negative features of their seminar, and the ways the program might have been improved. We also asked about influences on participants' careers, professional activities of teaching and research, and attitudes toward both their own and other disciplines. Finally, we asked about the influence of the seminar on participants' interactions with other faculty members and on their ties to the university. In a separate section, we asked about the potential consequences from interdisciplinary interaction and scholarship and about related factors that might affect such interaction at the university. Transcripts of tapes of the sessions provided the primary source of data for the study.

We used a pre-structured yet flexible data-coding scheme that permitted new interpretation in the course of the data analysis (Miles & Huberman, 1994; Patton, 1990). We derived the coding scheme from the literature review and the nature of the research questions. In many categories we applied directional coding to capture positive and negative cognitive and affective responses (Merriam, 1998). We employed the qualitative research software program HyperRESEARCH™ to code the data and analyze the results. Using HyperRESEARCH™ enabled us to combine and recombine codes by case.

We relied upon methods of triangulation to supplement participant interviews by analyzing selected information from the archival records of the program, conducting interviews with eight university leaders involved in the program's conception and development, and holding a series of structured conversations with the program's director. Multiple sources of evidence have been found to enhance validity and reliability in the application of qualitative research conclusions for understanding similar programs in similar contexts (Miles & Huberman, 1994; Patton, 1990; Pitman & Maxwell, 1992). Although qualitative research has limited application beyond its immediate and local context, reliance on multiple sources of evidence and data analysis sufficiently rich in detail enabled us to make tentative generalizations about the influences of the program throughout the population (Crowson, 1988). To further ensure validity and reliability, the two principal researchers used member checks, peer review, and coding reliability checks (Merriam, 1998; Miles and Huberman, 1994; Patton, 1990).

Findings

The findings below express the participants' views of the program's influences on scholarly activities, intellectual interaction across disciplines, and the university as the location for their scholarly endeavors. In an earlier paper, we noted the positive intellectual and affective stimulation experienced by a large majority of the participants in the sample (Frost and Jean, 1999). Although participants had some criticisms of the program's format and design, they seemed to enjoy the intellectual challenge of interacting with colleagues across disciplines around topics of common concern. The few negative responses seemed to be due to dissatisfaction with the program's use of broad topics and the lack of concrete research application.

Scholarly and Professional Activities

Almost all of the study participants reported important influences on their scholarly and professional activities. For example, one senior faculty member in the social sciences noted:

> The readings were broad-ranging [and] opened up pathways that I followed after the Luce [Seminar]. [The seminar] brought me to know some writers I hadn't known, some ideas that I hadn't been aware of, so I saw it really as a benchmark in my intellectual development. . . . I no longer think unidisciplinarily but multidisciplinarily. I don't approach any topic without . . . wanting to know what other disciplines have said about it. I feel that I'm doing a better job now. I am a better teacher, a better professor . . . a better citizen of the community, because of the Luce Seminar.

Archival records of annual participant evaluations reveal that many of the faculty members who took part in the program had initially anticipated some potential consequences for their teaching and research. The consequences for the study participants included finding new ways of conducting research and teaching, enhancing the quality of their scholarly thought, and increased commitment for applying academic knowledge to community service. Additionally, a number of faculty members credited the seminar experience with stimulating new career directions.

Teaching. Eighty-four percent of participants in the study indicated that participation in their seminars altered their teaching, sometimes in significant ways. For example, a junior faculty member in the humanities noted that:

> I actually offered a course that was a kind of offshoot from the Luce Seminar that looked at different kinds of disciplinary . . . approaches. . . . That course became a kind of prototype for these introductory graduate seminars that we now offer in the department. . . . I don't think I would have felt confident enough to do that without the Luce Seminar. I really needed a way of hearing people from other disciplines talk and absorbing their language, absorbing their mental habits as well, so that I could just resolve a problem in a couple of different disciplinary ways. So it gave me a greater mental agility that translated into some programmatic developments.

We identified five primary areas of teaching influence: motivation, style or technique, course design or content, involvement in interdisciplinary modes, and student empathy. First, some reported developing the confidence to try new things with their teaching. Some

participants talked about the inspiration to risk developing new structures for interdisciplinary teaching and class formats modeled after the "Socratic" method of discussing and defining scholarly problems and concepts. One natural scientist noted that his subsequent involvement in "team-teaching grew out of my confidence that there were people here I could work with" outside the natural sciences. After her seminar, one health scientist began meeting with faculty in other disciplines to propose and design new courses. Without participating in the seminar, she said "I wouldn't have had the confidence or courage [for] . . . taking the initiative, having the vision." One professional school participant credited her seminar experience with "encouraging me to go ahead and . . . risk" bringing in comparative literature into courses. For another participant who had not taught in a number of years due to administrative duties, the seminar helped him "reintegrate" into teaching activities.

Fifty-six percent of participants altered the design or content of some of their subsequent courses, usually reflecting subjects or readings from outside disciplines. For example, one social scientist used more literature in her courses, one humanities participant borrowed from cultural anthropology for teaching literature classes, and several other participants reported using a variety of examples from seminar discussions in their classes. One humanities participant cited a "significant effect on my teaching," since "I talk a lot in my classes now about the theory of evolution, about various things that I learned in the seminar." One professional school participant became more interested in "broader human questions" which have "shown up in my courses as well." His courses subsequently involved "real engagement, in ways that I think my students are [engaged], with bigger, more general human questions." One social scientist stated that he uses examples in classes that he "might have been hesitant to bring up before, like chaos theory."

About half of the participants altered their teaching style or techniques to some degree. Some began to model their teaching after the style of the leader, using "deep passage analysis" and asking "open" instead of "closed" questions. One social scientist initiated a new seminar format that focused on exploring the meanings and ramifications of one central topic. In this seminar, "the readings are broad ranging, chemistry, physics, whatever. . . . I absolutely love that seminar, it is a Luce Seminar . . . it could not have come from anywhere else, I would not be doing it, the students would not have had the experience, were it not for that." He also mentioned planning a similarly styled freshman seminar. One natural scientist stated that the seminar experience "has permitted me to . . . encourage my own students to act like those Luce Seminar students" and improve "my own communication skills."

Forty percent of the participants credited their seminar experiences for their subsequent team-teaching or interdisciplinary course development. For one humanities participant, "the most concrete [influence] I could point to afterwards was the team-teaching with one of the members of the seminar" who was a social scientist. She planned on participating in other team-taught graduate and undergraduate seminars with faculty members from the social and natural sciences, noting that the feeling that these were "possible to do" was "influenced by the seminar." One junior humanities participant planned to invite lecturers from outside disciplines in future courses. "Being able to talk to [faculty members outside her discipline] about expanded bibliography, the exchange of syllabi--all of [those] are things that potentially come out of this contact" in the seminar. Another junior humanities participant credited the seminar experience for learning enough about the approaches of other disciplines to develop "a kind of off-shoot from the Luce Seminar" that "became a prototype" for introductory graduate seminars in her department. One health scientist mentioned how the seminar experience led her to propose "that

we apply for teaching funds to do an interdisciplinary health care ethics course." For one social scientist, the seminar experience reconfirmed "that there are multiple ways to get to the truth," reinforcing the need to teach in a "pluralistic manner."

Several participants reported developing a new empathy for how the university's array of disciplines might appear bewildering to undergraduate students. For these faculty members, enhanced student empathy proved useful for student advisement or for understanding how students' disciplinary orientations might shape their questions and approaches in relation to class discussions. For example, one humanities participant stated that "I found myself often kind of thinking about what . . . the university must look like to an undergraduate [who tries] to put together a liberal arts education." Another humanities participant, somewhat reticent in the Luce Seminar discussions, realized the importance of developing an appropriate comfort level for students to help them participate in his own course discussions.

Research. Slightly over half of the participants we interviewed cited some influences on their research. Noting that the seminar pushed her to change the way she conducted research, a senior faculty member in a professional school remarked:

> Six years ago I was in sort of a quandary. I began to wonder, "what . . . difference does it make what [a] small group of people in another century, another country, were saying about issues?" . . . The seminar infused me with a new sense of how I could answer the question "so what" in a way that was satisfying.

We identified three primary areas of research influences: methods, content or activities and motivations. Twenty percent of the participants described influences on their research methods. These included incorporating contextual narratives into scientific research and supplementing literary studies with history for one humanities participant and cultural anthropology and history for another. In another example, one health scientist learned to weave narrative techniques into articles published in scientific journals: "it's that kind of weaving across the discipline that I . . . honed in the seminar."

About half of the participants subsequently expanded the content or activities of their research. Some added new questions or topics evolving out of their seminar's materials to their research agenda or expanded the scope of their research to address wider issues. Professional school scientists seemed particularly impressed with what they learned from the humanities. Most of the health scientists, for example, supplemented their primary research areas with connections to ethical or philosophical issues. One health scientist used her experience in the seminar to "retool myself in the area of research ethics" in order to apply for grants from the National Institute of Health. Another health scientist believed that he had received the "grounding" to "probe more deeply" into the relationship between learning and scientific knowledge. Similarly, several humanities participants expanded the scope of their research agendas with questions and information based on the social sciences. One incorporated elements of cognitive psychology into literary analysis; another discovered the assumptions of social science theory as a topic for research that produced publications; and two others enhanced their literary research with cultural and historical analyses. One social scientist credited the seminar experience with cultivating a "prepared mind" for integrating chaos theory into his social science research.

At the time of this study, six faculty members noted publications that evolved out of their seminar experience. Seminar participation directly inspired books for two faculty members and contributed toward the interdisciplinary content of books or papers for others. Four of these faculty members participated during the first three years of the seminars. Due to the brief

passage of time since seminar participation for some in our sample, the program's influence on subsequent publications may be understated.

Finally, about one third of the participants reported increased motivation for their scholarly work. Many of these found added affirmation for the value of their own interdisciplinary approaches or stimulation to take off in new directions. For example, one natural scientist gained the confidence to "try a bit of a different direction with my science" by connecting it with outside disciplines. For one humanities participant, the seminar provided the "impetus" and "encouragement" to "just do it" and use some aspects of history and anthropology in his literary research. One junior humanities participant planned future research projects with faculty members in other disciplines during the seminar that she intended to complete, now that she had received tenure. For one professional school participant, the seminar "provided an impetus to go ahead and look . . . a second time" to find out "what all is going on here?" when researching scholarly materials. Although she acknowledged that this process takes a lot longer than working with a "very narrow canon," her seminar experience convinced her that once you "open the question up and ask a bigger question," you become a "much better teacher and much better scholar." One health scientist remarked that he would not have been able to write some papers that emphasized philosophic issues without being "propelled" by the "intellectual vigor that came out of the seminars."

Quality of scholarly thought. Fifty-six percent of participants credited the seminar for enhancing the quality of their scholarly thought and for helping them develop new ways of questioning or defining scholarly problems. One social scientist, for example, viewed his participation as a "benchmark in [his] intellectual development," a "mind-stretching experience" that pushed him to "always think about contrasting terms" in order to clarify an intellectual problem. He thus no longer approaches his discipline "with blinders or limits." One professional school participant learned the importance of going back to passages "the second time and noticing what you hadn't seen." Another professional school participant improved his ability to take an important concept such as "responsibility" and trace its social and cultural origins. For him, the method of breaking down "what I thought was intuitively obvious" most "affected how I think." For many, the process of asking fundamental questions from multi-disciplinary perspectives clearly affected their approach to scholarship. In one striking example, a senior faculty member in the health sciences noted:

> We were always talking about scholarship. The question is where does it begin? It begins, of course, with a very good question, and the way I learned from participation in the seminar was not so much the answers that were given, but the questions that were asked. . . . Here I was with a group of maybe eleven [from] other disciplines and to [learn to] ask the right question, I think, helped you to have greater clarity.

Some participants discovered or rekindled ways of making connections between their own research and broad or fundamental issues. For example, one natural science participant commented that his seminar experience marked his "understanding of what might be called 'different realities'" and a much more "tolerant view of alternative ways of thinking about the world." For one professional school participant, the seminar experience provided "a more organized way of going about" ways of thinking and researching the "more fundamental questions about who we are as human beings," rather than always remaining focused on "the specifics and details." Another professional school participant was "stimulated to ask broader questions, more fundamental questions" such as "what does it mean to be a human being in the

end of the 20th century?" Similarly, one humanities participant felt that he had gotten the "liberal education revived" that he had lost by reading "more and more intensely in an increasingly narrow area," labeling this loss as "professional deformation." For him, the ability to reacquire this "broader view" requires "the discomfiture of being out of our milieus a bit" by talking to others outside of the usual "professional" and departmental spheres of interaction.

Administrators, as well as participants, clearly discerned some influences on quality of thought. For example, one administrator observed how the seminars had "cultivated a certain quality of mind" among participants that broadened their awareness of scholarly ways of questioning and weighing evidence. Another administrator commented that you could tell which faculty members encountered at university meetings had participated in the seminar "because of the way they would approach an issue," displaying the ability to "lower the unconscious dogma" of their disciplines.

Career orientation and academic service. Forty percent of the participants seemed to experience a sense of renewal toward their careers or academic service. In the words of one health scientist, the seminars "challenged us to re-engage ourselves and recommit ourselves to the academy. . . . It was the reason why we became professors and came to the university and I think it re-ignited that flame." Similarly, another senior health sciences participant noted:

> I think [the seminar] gave me at mid-career . . . a renewed enthusiasm . . . and it stimulated . . . my moral imagination greatly. . . . I had the motivation and the courage to go out and seek opportunities to create that kind of a dialogue and it truly led to [proposing] . . . an interdisciplinary health ethics course.

The influences on career orientation and academic service often varied according to level of seniority and disciplinary group. Senior faculty participants tended to credit the seminar experience for stimulating career renewal or new career directions while junior faculty participants described gaining increased confidence or an enhanced sense of integration into academic life at the university. Some senior faculty participants, for example, talked about experiencing a "renewal" toward their scholarship, feeling "reintegrated" into the intellectual life of the university or becoming "inspired" to work harder. One junior faculty participant spoke about "gaining the confidence" to go to academic meetings and therefore "not feeling automatically like you need to defer to senior people." She also indicated that the leader of the seminar provided a positive role model of scholarship: "it was just a very good example for me as a relatively young person in this profession of something to which I should be aspiring." Another junior faculty participant described her seminar experience as "a formative moment" in her career, since "it was my second year at [Emory], and I was involved in this group activity. . . . I learned so much and met terrific people, [and] it changed the way I thought."

For some participants, the seminar experience expanded their imagination about service to the community or the university. Natural scientists in the professional schools, in particular, seemed to feel more strongly about bringing together disciplinary perspectives for academic service. For example, one senior health scientist was surprised "to gain such a powerful renewed sense of the responsibility" for applying academic knowledge to community service. In addition, a number of health scientists increased their desire or confidence to draw upon resources from other disciplines to enhance the ways they study and serve their clients in the community. One health scientist stressed that the seminar "prepared him" more than any previous experience for participating in a multi-disciplinary program at the university that supports educational opportunities in the community. Another health scientist stressed the influence of her seminar on developing "expansive thinking" that enabled her to better grasp the role of her department in

relation to the wider context of the university, the "why we are versus what we do." A third health scientist gained the desire and confidence to speak out at university meetings: "I think I was the only (one from my discipline) who stood up to make a comment and a part of that was . . . that I had the confidence to do it."

Intellectual Interaction across Disciplines

Participants in the study described a variety of influences of the program on their attitudes about and interactions with faculty members across disciplines. Many reported an increased understanding and appreciation of their own and other disciplines that altered the nature of their contact with colleagues in their seminars and across the university. The words of one senior faculty member in the social sciences capture this change in orientation towards their colleagues:

> What I came away with was an appreciation for what [colleagues from other disciplines] do, how they think, a respect for what they do, and again, the sense of similarity. . . . The content is different, but there are the same kinds of struggles going on, the same kinds of questions, same kinds of controversy surrounding what they think about . . . the same . . . process of scholarship. . . . There's a friendly face in each one of those places for me now.

All but two of the participants interviewed in the study credited the seminar with altering their attitudes and feelings about their own disciplines, other disciplines, or interdisciplinary discourse. In addition, many participants gained insights into epistemological and other distances between disciplinary approaches. The knowledge and skills of the seminar leader seem to have played a key role. For some, the leader provided a structure that could show how "everything fits with everything else," orchestrating a "fresh way" to coherently view scholarly problems across disciplines.

We should note here that three participants appeared to gain little understanding or appreciation of their own discipline or of disciplines outside of their own. For them, the seminar experience was primarily negative. These participants, who had considerable exposure to interdisciplinary work, seemed to feel that exemplary representation of hands-on disciplinary activities had been lacking in their particular seminars. Of the three, two were in the humanities and one in the social sciences. As one humanities participant wondered, the seminar "brought a lot of people together that wouldn't have gotten together otherwise . . . but I'm not sure to what end." He further noted:

> [the seminar] . . . showed me how . . . artificial interdisciplinarity, which is what the Luce Seminar is . . . can't take the place [of interdisciplinarity] . . . organically developed out of [scholarly] work and out of . . . systems of value [or] kinds of collegial relationships . . . where faculty engaged in a specific sort of interdisciplinary project . . . get together over the course of the semester and do readings.

Similarly, one social scientist complained:

> [the leader] made it very clear that we would not talk about contemporary issues, we would not talk about our role as faculty, we would not talk about our responsibilities to students. We would only talk about intellectual, academic issues and that really . . . felt profoundly uncomfortable to me. . . . So nothing that

> I remember learning in the interesting conversations that we had about each of the readings really carried over into my work.

Orientations toward participants' own disciplines. For many participants, the seminar altered their understanding and appreciation of their own disciplines. As one participant put it, "any academic worth his or her salt has doubts about his or her discipline." Fourteen (56 percent) increased their understanding of the nature of their disciplines relative to other disciplines, while 19 (76 percent) increased their appreciation of their disciplines. Many gained a clearer understanding about the foundations or purposes of their own discipline. For example, one humanities participant ended up feeling "glad" about her choice of discipline because she gained a new understanding of the foundations of her discipline:

> It's so basic [but] it's really hard . . . to have a sense of your field as a field rather than simply a state of nature, and it's [a] little bit like travel that way, just getting some distance and anthropological perspective on how your own field is organized.

One social scientist saw how the scientific method provides a foundation for her discipline compared to the humanities and another humanities participant saw how his discipline encompasses the richness of the "whole man" relative to the natural sciences and professional schools. Notably, some health scientists saw more clearly both the rigor and narrowness of their disciplines while commenting on their need to expand their knowledge base to incorporate insights from other disciplinary groups.

Over three-quarters of the participants developed a greater appreciation or commitment toward their disciplinary endeavors. For example, several health scientists experienced a deeper appreciation of the applied nature of their disciplines. One health scientist noted that, in comparison to faculty members in some other disciplines, "we have to have answers and we have to make decisions in real time that impact on the lives of people." Two other health scientists seemed "reaffirmed" about the importance of their discipline due to the respect accorded them in the seminar, despite fearing a lack of acceptance because of their inadequate knowledge of the humanities. Some of the humanities participants used phrases like "richness," "interpretive," and "agility" in relation to their disciplinary orientations relative to the "empirical" social and natural sciences. One humanities participant stated: "I was affirmed in my immediate, my original assumptions about why I do this, that, you know, I'm much more at home with, I guess, more ambiguity, more range of interpretive possibilities than relying on the certainty of what other people might call empiricism." Citing the wide range of content in social science studies, several of the social scientists gained added appreciation of how their disciplines provide a "distinctive contribution" through their unique window on interdisciplinary knowledge.

Orientations toward other disciplines. Orientations toward other disciplines among participants seemed enhanced, sometimes dramatically. Nineteen faculty (76 percent) increased their insights into the approaches of various disciplines, while 21 (84 percent) gained a greater respect or appreciation for other disciplines. A few remained critical or bewildered about other disciplines. Noting the existence of some barriers to gaining a real sense of what scholarship means for faculty members in other disciplines, one senior faculty member in the professional schools noted:

> It is not natural, it is not easy, it really requires the kind of thing like the Luce Seminar, which was a sledge hammer approach to generate that kind of conversation. . . . It requires moving people out of their ordinary circumstances in some profound way. . . . I finally began...to understand what it was to be a

> [professor in my own discipline] as opposed to an English professor or a German professor . . . and that . . . it was legitimate . . . to have a paper that was evocative as opposed to something that was analytically grounded. . . . One of the most important features of the seminar was simply a function of humility. . . . It at least informed everybody else at the table the . . . gigantic range of material that all of us didn't have at our disposal . . . and the range of knowledge that other people did have to bring to that conversation.

Enhanced insights about other disciplines seemed to revolve around methods, epistemology, function or purpose, and style of discourse. One humanities participant, for example, saw more clearly the difference between the "critical" approaches across the humanities and the "empiricism" of the natural and social sciences in relation to evidence, truth, and fiction. Another humanist commented about "the social science moment that would come up in the middle of [their] presentations, the overhead projector would come out and up would go the statistics and the graph . . . and that is where I would sort of tune out . . . and that really is a cultural difference." Several of the participants outside of the professional schools noticed how their discussions often emphasized their functional responsibility to educate students for professional occupations. For example, one humanities faculty member commented that the professional schools orient their teaching toward professional goals for the students: "they think I'm frivolously wasting everybody's time, and I think they're just doing their bit churning out the next robot."

Even if their understanding remained incomplete, many participants gained deeper respect or appreciation for the subtleties and complexity of other disciplines. Some began to grasp the "wonderful knowledge" and "depth" available across disciplines. In particular, natural scientists and professional school participants commented extensively about gaining greater understanding and appreciation of the methods and approaches of other disciplines. One natural scientist seemed profoundly affected by her exposure to other disciplinary perspectives:

> If I had to sum it up in one sentence, I think [the seminar] has made me aware of . . . how many different versions there are of truth. It's very easy, for the physical sciences especially, to think we have a corner on truth. You know, you want to know how the universe started, we can tell you. Never mind mythology or religion, we've got it complete with empirical evidence. . . . I see how valuable other kinds of truth are, and I think I'm at the point now where, in my mind, I can give these things equal value. . . . We're all part of the university.

She also learned that "humanists put the word above all else" and "passionately and vividly . . . defend their opinion about what was on the page," whereas scientists "don't take words with that same depth." Another natural scientist in the professional schools was surprised at the extent to which an "epistemological chasm" emerged between the humanists and the scientists in the seminar between the "scientific view" and the "so called social construction of knowledge." This chasm brought him to a "level of bewilderment." A third natural scientist commented about having to learn the "different language, different sentence structure" of literary scholars while another rekindled her appreciation of the of the social sciences and the humanities, which she characterized as the "abstract disciplines." One professional school participant was surprised to learn about the "evocative" rather than "analytically grounded" standards of discourse that she believed existed in the humanities and social sciences.

Views of interdisciplinary discourse. We have noted above how participants perceived varying degrees of epistemological and other intellectual distances between the approaches of

various disciplines. While some participants talked about the ultimate difficulty of interdisciplinary discourse, others gained a sense of how disciplines share common questions. One humanities participant, for example, acknowledged "the value of trying to communicate across disciplinary lines . . . that cross school lines at some point . . . with a spirit of possibility." However, she believed that ultimately, the languages of the disciplines were "incommensurate" and "were just at the end of the day at odds." Based on their seminar experience, some participants outside of the professional schools suggested that interdisciplinary conversation might work better if limited to the arts and sciences. Remarked one social scientist, "when you recruit from the medical school or from public health, to a less extent the law school . . . you are dealing with people who are operating under a different institutional context" who cannot break free of the pressures of bringing in grant funding. One humanities participant thought that, in spite of the "top-down interest" in bringing the schools together, "it is easier for people in history, literature, philosophy to undertake something together or understand . . . their common interests." Another humanities participant felt that the "gap between the disciplines within the college [of arts and sciences] was more easily overcome" than that between the arts and sciences and the professional schools. Professional school faculty "seemed to be on a different planet."

Despite some persistent barriers, some faculty became convinced of the possibility of moving beyond the jargon of the disciplines into mutually supportive intellectual exchange. One social scientist came away with an appreciation for how disciplines, despite varied contents, can embark on "the same kind of struggles going on, same kinds of questions, same kinds of controversy surrounding what they think about, they do the same things we do in terms of process of scholarship." Another social scientist felt that the seminar experience provided a "good model for constructive exchange of ideas among faculty" as it "reinforced my sense that the faculty at Emory need more of these kind of events." A natural scientist learned that "people from other disciplines are also of my kind" as discourse in the seminar seemed to break down "vertical walls" between disciplines. A senior health scientist was able to grasp the importance of the "abstract disciplines" through the seminar's focus on the "larger questions that we often get more in . . . little conversations at night among a bunch of undergraduates." He learned that these "larger questions" exist at a "different level than we're accustomed to in our more hands-on activities in . . . our search for knowledge in science." One junior humanities participant came away with "a much greater sense of shared collaborative venture that we're all engaged in," while a senior humanities participant's conviction about the "importance of conversations across the disciplines and the professions" was strengthened.

For many participants, the interdisciplinary discourse in the seminars seemed to represent an opportunity to explore knowledge without specific expectations. Across disciplines, participants seemed to appreciate the seminar as a place to engage in pure scholarship. In the words of one social scientist, the seminars sent a message to faculty that "interdisciplinary conversation, discussion without an immediate payoff, is important for the sheer experience of it . . . precisely because it need not be instrumental." As one natural scientist from the professional schools noted, participation in the seminar "felt like ideas were important, like we always thought they should be, ideas for their own sake . . . it was my idealized view of what university life was truly all about, but I'd never experienced." Another professional school natural scientist was delighted that the seminar focused on "ideas for their own sake, not ideas because it's a grant application." Said one humanities participant, the seminar was a place where "ideas are finally sought for their own sake . . . which I'm old fashioned enough to think is still what the university is all about." In the words of another humanities participant, the seminar provided her

the opportunity "to think without distraction, which is a rare thing for scholars these days." Finally, one junior faculty participant in the humanities was appreciative of the unusual opportunity to interact with faculty across the schools and disciplines that was "just purely for intellectual gratification" rather than at faculty meetings or committees under "charged" stakes.

Contact with faculty from other disciplines. For ninety-two percent of the participants, the intellectual interaction and social friendships that developed during the seminar continued after the seminar to some extent. These included informal interactions such as lunch, conversation, and reading groups and formal interactions such as research projects or teaching. Many of these participants described continuing their contact with seminar colleagues or "friends" for intellectual advice, research resources, and informal intellectual conversation. In describing how the discourse across disciplines in her seminar translated into a general feeling about faculty members across the university, one junior faculty participant in the humanities stated:

> We just don't get that many opportunities to talk across disciplines, to get to know people in other disciplines and doing that has just been really, really helpful in feeling as though there is a . . . larger intellectual community that you really are part of, rather than just being a member of your own department. . . . Particularly in terms of my work, . . . being able to identify people . . . working in the same areas, this is very important. I've gone to other people [to] ask them . . . methodological things about the work I'm doing. . . . That's been very helpful.

Some participants described increased levels of comfort or confidence for contacting not only fellow seminar participants but also for reaching out to faculty members outside their own disciplines across the university. One junior humanities participant described how the seminar experience provided a "portable understanding" for enhancing her intellectual and social interactions with colleagues across the university. In speaking about faculty members from other disciplines, another junior humanities participant described how an understanding of the different disciplinary approaches to "evidence and truth" of her seminar participants gave her the "confidence" to "just go up and ask them something." One senior health scientist noted how her seminar experience deepened "my reverence, my affiliation, my affection, my appreciation for my colleagues and it's strengthened my understanding of how their education and their knowledge-base can ultimately enhance what we're doing here at Emory for our students." About one third of participants cited the influence of their seminar participation on their subsequent participation in interdisciplinary "add-on" seminars, study groups, lectures, and multi-disciplinary programs provided by the Ethics Center and other parts of the university.

The experience of one natural scientist illustrates some far-reaching influences of his seminar on his interaction and work:

> These are the people I'll have coffee with now, when I want to sit and . . . be with a friend who's also fun to talk to and have interesting viewpoints about things. . . . Some [encounters] have gone further, a little more sociable, dinner at each other's homes, and [with] people outside my department in general, which again makes [for] a kind of bonding that Emory is not so famous for.

For him, one main benefit of participating in the seminars was "making connections, to some extent friendly, and to some extent professional, that have paid off in my teaching and my research." These are people that "I draw on when I think about, for instance, interdisciplinary teaching, or when I think about things that I want to write that I'd like to communicate to non-scientists . . . people I go to because I know they are broad-[ranging] people." Based in part on

motivation from his seminar experience, he embarked on several team-taught courses with faculty members in the humanities. One of these courses provided the "best student ratings I've ever had. . . . It was a great experience and I think the background of the Luce Seminar had a lot to do with my thinking [that] this can be done and should be done." At the time of the study, he also was continuing to plan and participate in other interdisciplinary courses with various humanities faculty members across the university.

While a mechanism to support continued interaction was not part of the program's design, almost half of participants in the study sample lamented the lack of follow-up mechanism. Some lamented the "missed opportunity" to build upon the intellectual "ethos" generated by the program through some sort of institutional support. For many of the participants, intellectual friendships that flourished initially often faded away. As one social science participant put it, "once the seminar was over, it's like 'poof everything evaporated.'" One humanities participant experienced some continuing intellectual friendships in the initial years following the seminar, but "after a while, they went the way of all flesh . . . and we all retreated back into our own work." One health scientist felt it was 'a shame that this movement toward more cohesion to disciplinarity . . . has not been maintained." For another social scientist, the seminar helped break down "physical barriers" between people from different departments. Except for the seminar, opportunities to "sit around a table and talk about academic and intellectual matters" do not exist. She further noted that "I've met more people on the Emory campus by playing in the gym than any other way."

The University as the Location for Scholarly Endeavors

Eighty percent of the participants reported enhanced feelings of attachment to or integration with the university as the location for their scholarly and professional endeavors. For example, one senior humanities participant stated that the seminar "strengthened my loyalty to Emory." He further believed that "a school that believes sufficiently in the intellectual exchange that its own faculty can have with each other, that they will go to the trouble and expense of instituting such a thing, gets high marks in my book." Another senior humanities participant felt that the university's investment in the seminar program sent a "signal . . . that the university was interested in my own intellectual developing in areas of fundamental importance above and beyond my work in my discipline." Similarly, for a senior professional school participant, the seminar program "was a signal, hey, somebody in the administration building is interested in the quality of thinking and leadership of its faculty, interested in matters beyond attracting students, providing courses, and making sure this faculty is publishing [and] visible." He further noted that the seminars offered a contrast to the university as the "big business . . . of fund-raising for high level administrative operation with the faculty to do the necessary gut work;" it was "one of the things that made it look the other way."

Some participants developed an enhanced sense of belonging to the university, while others reported experiencing less physical or intellectual isolation. As revealed in the following quote from one senior health sciences participant, some perceived the university as a warmer place after their seminar experiences:

> This was an incredible experience of being able to relate to others in the university. . . . I was in Timbuktu in terms of relationships with the university. This was my first . . . real exposure to other faculty and to the life of the university. . . . When you think of what the university's about, which is to enlarge

> our minds and our views, . . . I think that Emory . . . had very little to offer me. . . . As I got more acquainted with the larger community, it has filled in the void, . . . a void that is still not filled in many of the people [who] are clinically or scientifically oriented. . . . At least (the seminar) provided to me a greater loyalty and love of Emory than I had in the last ten years or so since I took it, than [in] the previous 25.

Another health scientist stated that she had been led to the point "where I feel like I know people in the university . . . in a way that I didn't know, even though I had worked here for years." The seminar experience helped one senior social scientist feel a sense of "diffuse solidarity" with other colleagues. For one senior humanities participant, the seminar was a way to "better understand the variety of the university" and feel part of the "university at large." Another senior humanities participant described how his seminar served as a "reminder that across disciplines, generations and clubs or faculty groupings, each of us . . . has an interesting mind." As one senior social scientist remarked, identification with the Luce Seminar participants has "given me a way of dealing with some of the adverse effects of growth at Emory, because I like to think that [now] there's some sort of small college here that's hidden within the walls of the university."

In particular, junior faculty participants and others who felt some physical or intellectual isolation from the rest of the university seemed to experience an enhanced sense of connection with the university. Two junior faculty participants credited the seminar for helping to integrate them into the life of the university. For example, one junior faculty participant reported "feeling as though there is a . . . larger intellectual community that you really are a part of, rather than you just being a member of your own department." One senior humanities participant who had described his physical location in an "isolated" part of the campus recalled his seminar experience as one of connection with the "wholeness" of the academic enterprise. For him, the "university exists only to the extent to which we speak to each other" while "most of our days consist of going to the office, going to class . . . [and then] going home." For one senior professional school participant, the seminar made her "feel better and better about being here, in the sense that this is a place that is clearly committed to that kind of interdisciplinary work." For another senior professional school participant, his seminar experience was the only "formal means" for providing "conversation and exchanges on a professional level about knowledge" he had encountered at the university. For him, the seminar helped satisfy a longing for this type of intellectual exchange. One of his reasons for choosing academic life over private practice was "this idea of being at the university club, drinking a shot of brandy, and discussing philosophy or history or something like that with other faculty members."

For many natural science participants, the seminar fostered a strong sense of social connection with the university. For one senior health sciences participant who had only been at the university several years, the seminar helped her connect as a "citizen of Emory" and "feel like I'm part of [Emory] in a relatively short period of time." For her, it provided an opportunity to overcome "a kind of insulation to the intellectual life of the university" that exists, she said, in the professional schools. Another health sciences participant who described feeling isolated from the rest of the university experienced a sense of being "cared for" by the university because he was "so openly accepted" and welcomed into the seminar group. Another health scientist described her seminar participation as "a highlight" of her development as a "faculty member within a university community, which is sometimes hard to feel here because you're so focused within your own school."

Several of the participants described increased levels of comfort and familiarity with fellow seminar participants at committee meetings. For example, one participant stated that "no matter where I go on campus, there's some sort of gathering, I'll never be sitting alone, because there's somebody from the seminar." Another cited the influence of the seminar on developing ways of communicating with other faculty at meetings that helps her drop her defensive shield when confronted by academic sloganeering among faculty from different departments. As a result, she was able to reach better reach mutual understanding to work together on solutions to administrative problems. For her, this evolved out of her seminar's example of a "different notion of how we might live and work together as faculty that were committed to an intellectual ethos that would be pervasive [in] whatever we did."

For twenty percent of participants, the seminar experience had little or no influence on their attachment to the university. Two participants who generally dislike their seminar experiences noted that they sometimes go out of their way to avoid certain members of their seminar class. Although some senior participants in the professional disciplines and in the natural scientists described enhanced ties to the university community, some senior faculty participants who had described a long history of faculty interaction across the university noted minimal impact from seminar participation on their ties to the university. For one such senior humanities participant, the seminar experience did not lead to "working relations with other faculty members." It also did not influence his ties to the university, even though he had "hoped that it would."

Discussion

Our findings provide evidence for some broad and deep influences of the Luce Seminars on most of the participants that we interviewed. However, not all participants seemed to respond to the format of exploring broad themes across disciplinary perspectives. For example, several in the arts and sciences who had previously engaged in interdisciplinary research seemed to get little out of their experiences, indicating a desire for more practical, contemporary, or "organic" discourse tied to specific research. The importance of the kinds of expectations and learning styles that faculty members bring to interdisciplinary seminars confirms Armstong's (1980) observation about the importance of individual variation on what faculty members take away from such programs.

Our data revealed insights that address the research questions and highlight some aspects of faculty culture that can shape the outcome of intellectual interaction across disciplines. There are some limits to the scope of qualitative analysis that prevent the application of our findings to the entire population of participants. However, archival evaluation documents indicated that the majority of participants in the population described anticipating similar influences on their orientation toward scholarship and faculty interaction. We make tentative conclusions about the generally positive effect of sustained discourse across disciplines among the population.

Research Question One: How did the program influence participants' attitudes and behaviors related to their scholarship and professional work? In what ways did the program affect their orientation toward their teaching, research, academic service, and career? The seminar series seemed to stimulate participants' imaginations about ways to enhance their teaching, research, and service. Many developed new approaches to defining and exploring problems that spanned disciplinary boundaries. Moreover, the program seemed to stimulate positive feelings that complimented shifts in intellectual perspectives. Many participants became

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more comfortable or confident in engaging in scholarship with colleagues from other disciplines or developing new interdisciplinary approaches to teaching, research, and other career-related activities. These professional influences appeared to exceed the expectations of the program's designers.

Many participants expanded their research horizons or developed a strong sense of how to articulate questions and define problems that span disciplinary boundaries. For some, learning how to investigate concepts that had previously seemed "intuitively obvious" often led to asking the "more fundamental questions" in their scholarly work. Some participants incorporated the content or methods from some other disciplines into their research. Such an integrated approach to research seemed particularly meaningful for professional school participants, perhaps because they seek ways to tie narrative methods or ethical issues into scholarship aimed at solving problems in the community. Perhaps more importantly, for many participants, their seminar experiences stimulated or affirmed their desire to incorporate perspectives from other disciplines when appropriate and expand the breadth of their research beyond a "very narrow canon."

After their seminar, many participants used ideas or themes they had discussed in the seminar or collaborated with colleagues from outside disciplines in their teaching. Some participants enhanced their courses with "broad ranging" readings and discussions, often relying upon the "open" questioning style that they experienced in their seminars as a "prototype." Moreover, a number of participants reported gaining sufficient confidence or encouragement from learning about the language and methods of other disciplines to experiment with interdisciplinary modes of teaching. A few participants also mentioned developing a new empathy for the ways students try to make sense of the many disciplinary perspectives at the university.

Furthermore, some participants developed an expanded sense of academic service or experienced a profound shift in career direction. These influences appeared to be primarily affective in nature, concerning increased levels of commitment, enthusiasm, or feelings of integration. Influences on career orientation sometimes varied by seniority, confirming previous research about the relationship between programmatic influences on faculty and seniority levels (Baldwin, 1990; Centra, 1989). Some senior faculty participants experienced feelings of career renewal or inspiration to shift career directions, while some junior faculty participants were inspired by the positive role models for scholarship provided by senior faculty members in the seminars. Some participants gained more confidence and desire to engage in academic service that connects disciplinary approaches to knowledge in order to solve societal problems. These feelings stood out in particular among professional school scientists, perhaps due to the implications of interdisciplinary intellectual exchange for the practical and applied nature of their work.

Research Question Two: How did the program influence participants' attitudes and behaviors related to intellectual and social interaction with their colleagues at the university? In what ways did the program affect their contact with faculty members from other disciplines and their orientation to their own discipline, other disciplines, and the value of interdisciplinary discourse? We found that participation in the program seemed to enhance both the intellectual and affective aspects related to both disciplinary orientation and interaction among colleagues across disciplines. The "intellectual space" in the seminars seemed to create good will, allowing participants to view the ways in which different fields of knowledge potentially form a meaningful whole. As a result, not only did many participants develop a deeper understanding

of their own and other disciplines, but many also began to view faculty members across the university with greater respect, warmth and appreciation.

The seminars helped participants look inward as well as outward. Deep immersion in sustained interdisciplinary discourse around profound topics required defining and defending the perspectives of participants' own disciplines as well as the vocabularies and styles of discourse of other disciplines. Such intensity seemed to help clearly delineate the intellectual foundations of faculty members' chosen disciplines and reaffirm the reasons why they had initially developed affinities for their choices. The influences of interdisciplinary discourse on the ways participants understand and appreciate their own disciplines supports Clark's (1983) observation that many faculty members only "vaguely" sense the underlying foundations of their own disciplines.

Most participants commented extensively on the ways in which the program enhanced their appreciation and respect for colleagues from other disciplines. In particular, professional school and natural science participants noted the ways in which their participation helped them overcome feeling physically or intellectually isolated from the heart of the university. Many of these participants seemed to display an even greater sense of wonder and appreciation with respect to the wide range of disciplinary perspectives, perhaps because these faculty members may receive less exposure to broad intellectual questions and issues than do those in the humanities and social sciences. Some participants experienced not only the potential "wholeness" of the academic enterprise, but also raised expectations of the value of intellectual exchange across disciplines for enhancing scholarship. In addition, professional school faculty members may readily grasp the potential usefulness of integrated knowledge applications in their scholarly work in ways that disciplines less directly tied into vocational and practical application do not. Professional faculty participants also seemed to delight in exploring ideas "for their own sake" that they perceived to be what university life was "all about," perhaps indicating an implicit desire for validation of their own importance in the framework of the larger community of scholars.

While many participants gained an appreciation for intellectual discourse across disciplines, some believed that some disciplinary distances remained firm. Some charged tensions remained between disciplinary groups in the minds of many of the participants, perhaps confirming the powerful influences that differing approaches and styles of knowledge acquisition among disciplines and groups of disciplines exert on faculty culture (Becher, 1987, 1994; Clark, 1983). These tensions seemed to revolve around the professional and arts and sciences faculty and the epistemological "chasm" between objective, empirical sciences and relativist, interpretive literary knowledge traditions. Some participants adhering to the "scientific view" remained bewildered by the "evocative" or "social construction of knowledge" approaches in the humanities and the social sciences. Although many gained a respect for the natural sciences, some participants in the humanities seemed to resist empirical approaches of the sciences and some social sciences that fail to appreciate the "whole man."

Another tension sometimes emerged between participants in the arts and sciences and the professional schools. Some participants in the humanities and social sciences believed that interdisciplinary discourse might be more fruitful without participation from the professional schools whose practical and vocational mission seemed to be perceived as peripheral to the core of scholarly questions. In the words of one humanities participant, professional school participants seemed to belong to "another planet." Ironically, some of the strongest scholarly and other influences of the program seemed to occur among professional school participants. As noted above, perhaps the orientation of professional schools toward practical societal solutions

combined with the lack of exposure to overarching scholarly issues results in particularly strong influences of interdisciplinary discourse on professional school participants (Bok, 1986; Clark, 1983; Halpern, 1987).

For many participants, the program not only enhanced their views of their colleagues across disciplines at the university, but also imbued them with the confidence and desire to seek informal and formal types of interaction. The seminars helped reduce barriers to communication by providing an appropriate model of what can be accomplished through discourse across disciplines in a "spirit of possibility." For many participants, the resulting lessening of "conscious dogma" and concomitant rise in empathy for other disciplinary perspectives often trickled down to administrative meetings, committees, and the interactions among faculty across the university in general. As a result, many participants felt more comfortable and motivated to make "connections," seeking out both participants and other faculty members outside their disciplines for intellectual discussion, friendship and formal interaction. Formal types of interaction included team-teaching, research collaboration, and faculty programs exploring ethics and other topics from a multi-disciplinary perspective.

However, many participants lamented that their interaction with the program's participants had steadily declined. A number of these faculty members wished for a formal mechanism to support such continued interaction, indicating that the program perhaps tapped into a desire for a way to experience local participation in the larger community of scholars implicitly resonant in the professional culture of academia (Clark, 1983). At the same time, the lack of faculty initiative to create opportunities for further intellectual exchange with colleagues outside their disciplines may reflect the entrenchment of academic specialization requiring substantial investment of time and resources in individual scholarly work (Bender, 1998; Damrosch, 1995; Geiger, 1987, 1993).

Research Question Three: How did the program influence participants' attitudes and behaviors related to the university as the location for their scholarly and professional endeavors? In what ways did the program affect their view of and attachment to the university? Many participants developed a wider view of and warmer appreciation for the university as more than a collection of disparate parts. By increasing understanding and appreciation for their colleagues across disciplines, the seminars provided a window into the multifaceted dimensions of the university, enabling many participants to peer beyond the usual confines of their narrow perspectives "into the university at large." The seminar experience helped mitigate a sense of intellectual or physical isolation for many participants, particularly for those from the natural sciences and professional schools. By enhancing their feeling of acceptance from scholars perceived to be broadly educated in common intellectual themes, some professional school and natural science participants felt more "accepted" by the university.

Generally, a number of participants seemed to deeply appreciate the university's investment in a program for faculty that did not increase scholarly or administrative expectations. Overall, the investment in faculty development in the context of local interaction provided a positive symbol of institutional culture that countered the usual "instrumental" view of expectations of scholarly production and academic service designed to redound to the university. Due to different levels of status and experience, we observed the differential programmatic effect on faculty according to seniority that some scholars have described (Baldwin, 1990; Centra, 1989). As a result of the seminars, junior faculty participants tended to feel more integrated into university life while some senior faculty participants expressed a stronger sense of loyalty or appreciation toward the university. However, many of the senior faculty members who reported

influences of participation on their scholarship and disciplinary orientation did not seem to experience any degree of enhanced attachment to the university. Through frequent faculty contact, most of these senior faculty members had previously established a high level of integration into university life.

Thus, it appears that participation in the seminar influenced numerous facets of intellectual and scholarly life at Emory. Three distinct characteristics of the program seem linked to some intellectual, affective, or symbolic dimensions within faculty culture at the university.

First, the program seemed to expand the intellectual horizons of its participants. The seminars provided a model for interdisciplinary discourse that encouraged exploration of the breadth and depth of different approaches to knowledge and truth. This process involved defining concepts related to profound topics of common concern and immersion into the assumptions and vocabularies of disciplinary perspectives. The provision of release time from teaching and the semester-long duration of the courses made possible the sustained intellectual effort and preparation needed to reap the positive benefits of this type of intense and integrated approach to knowledge exploration. As a result, many participants adopted these approaches to exploring and defining intellectual problems in their orientation toward teaching, research, or academic service. Additionally, many participants developed a new "quality of mind" that permitted them to stretch deeper and wider in conceptualizing intellectual problems and exploring solutions through their teaching, research and service.

Second, the program appeared to build a reservoir of good will that inspired participants to engage in unfamiliar and difficult discourse. The program established an atmosphere for discussion that lowered ego investment and heightened comfort for exploring a bewildering array of disciplinary vocabularies, methods, and ideas. Our data provide some evidence to support Becher's (1994) contention that shared understanding across disciplines requires reducing strong negative stereotypes and feelings of intolerance. Participants also seemed to gain great enjoyment and satisfaction from exploring ideas related to the "broader view" and articulating the role of their own disciplines in this quest. As a result, participants experienced increased appreciation for and interaction with colleagues from other disciplines and recognized how working with people, ideas, or methods from other disciplinary perspectives might enhance their own scholarship. These affective factors contributed to developing sufficient comfort, motivation or courage to subsequently "risk" participation in interdisciplinary teaching, research, and programmatic activities that pushed aside the usual disciplinary boundaries. As Armstrong (1980) noted, creating an atmosphere of empathetic peer support in interdisciplinary faculty programs can help enhance their subsequent impact on faculty scholarship and vitality.

Third, the program seemed to tap into some symbolic dimensions of both professional and institutional culture. Our data provide some evidence for Clark's (1983) observation that, despite outward displays of rationality and reason, powerful affective and symbolic bonds often support attitudes, beliefs and behaviors within higher education. For many participants, the seminar series created an intellectual sanctuary for knowledge exploration unfettered by "instrumental" expectation from both their departments and the university. Commonly used phrases such as "ideas for their own sake," "purely for intellectual gratification," "discussion without an immediate payoff," and an "older scholarly ideal of what it means to be a university" reveal the program's function as a symbolic touchstone for participation in an overarching "community of scholars." As one faculty member noted, the seminars provided a "concrete" instead of an "abstract" way to participate in this community. Despite the dominance of

disciplinary culture, the implicit desire to participate in a coherent professional culture still seems to carry surprising weight in faculty professional orientation, even at the research university. Additionally, by providing the structure and "intellectual space" for rich, local interaction across disciplines, the program seemed to symbolize significant investment by the university in the intellectual growth of its faculty.

At Emory, the Luce Seminars seemed to establish a point of symbolic convergence for elements of institutional and professional academic culture that both complimented and extended faculty's orientation toward disciplinary culture. The program revealed some embedded symbolic values inherent in faculty cultures that, as Peterson and Spencer (1990) suggested, may provide key clues to the meanings that shape attitudes and motivate behavior among the faculty. Taken together, these symbolic dimensions of institutional and professional culture both tapped into and helped extend a desire for the type of "familiar intercourse" described by Newman (1996) in the 19th century and later extolled by Hutchins (1968). Not only did many participants explore what Hutchins (1968) called "truth whole," they also gained renewed understanding and commitment toward the work of their own disciplines. This suggests that a faculty interdisciplinary program imbued with intellectual purpose, affective support, and symbolic power can potentially form some level of cultural coherence that bridges the disparate spheres surrounding the specialization and isolation of knowledge fields (Damrosch, 1995; Dill, 1991; Kerr, 1982). Such cultural coherence, in turn, can help lay a foundation for the type of intellectual exchange across disciplines many claim as necessary to enhance teaching and research and solve large-scale societal problems (Bellah ,1996; Boyer, 1990, 1997; Damrosch, 1995).

Furthermore, programs of serious and sustained intellectual discourse across disciplines may offer one way to renew the sense of shared purpose that many colleges and universities seek (Metzger, 1987). The breadth and depth of influences from this program appear to be linked to participants' implicit desire to experience a sense of concrete, shared purpose. By creating a context for interaction that tapped into and extended this desire, the program helped ease the effects of scholarly isolation and disciplinary stereotypes (Barnett, 1994). As Bland and Schmitz (1990) noted, faculty programs that support academic values within the community can pay important dividends in enhancing scholarly vitality. Because of heavy emphasis on the production of specialized knowledge from individual star scholars (Bellah, 1996; Damrosch, 1995; Geiger, 1986, 1993; Ruscio, 1987), experiences of shared purpose in rich, local interaction across disciplines may have particularly important ramifications for faculty vitality and intellectual community for research universities.

Despite the program's many positive influences on scholarship, we caution against inflated expectations for seamless faculty interaction across schools and disciplines. Although the program pointed the way for fruitful local interaction across disciplines, powerful limits to such interaction seem to remain. While many participants reported experiencing significant enhancement of their thoughts and feelings about colleagues from other disciplines, some believed that ultimately the disciplines were "incommensurate." As some scholars have noted, the culture surrounding disciplinary specialization dominates the other spheres of faculty culture (Astin, 1990; Clark, 1983; Dill, 1991). Despite the value of the program for enhancing interdisciplinary understanding and good will, our data reveal that certain disciplinary perspectives that intensely defend what passes for valid and useful knowledge and discourse hold considerable sway in circumscribing faculty interaction (Becher, 1987, 1994, 1995). In addition, we have observed how preferences for concrete, current, or hands-on research among some

faculty may render programs of general, theme-based interdisciplinary discourse less potent for some learning styles and intellectual orientations.

Some boundaries within faculty culture appear to be particularly entrenched, often marked by defenses imbued with emotional charges. Despite the high marks given to the seminar series for lowering the clashing of egos and ideologies, we found some evidence for Armstrong's (1980) observation that interdisciplinary dialogue often produces high levels of anxiety and defensiveness. Although the seminars helped faculty members soften negative stereotypes, many boundaries seem to hinder the potential for valuable intellectual exchange. As noted earlier, two examples include divisions between the empirical sciences and the humanities and between the professional and non-professional groups of disciplines. The first cultural fault line divides what Becher (1987, 1995) called the realist approach to knowledge from the relativist approach. Participants from the natural sciences and social sciences generally tended to put greater stock in the validity of empirical observation and the ability to draw valid conclusions of general applicability from those observations. Those from the humanities and some social sciences tended to view perceptions of knowledge in a social context, subject to the vagaries of structural, historical and cultural contexts. While we do not delve into the subtleties among disciplinary perspectives, our analysis confirmed that this epistemological boundary did seem to hold for many participants. If not properly diffused, these boundaries can generate considerable "bewilderment," if not suspicion, in interdisciplinary discourse and reduce its potential benefits.

The second cultural fault line concerns the differing styles and missions of the professional and non-professional disciplines (Clark, 1983, 1987; Halpern, 1987). Some arts and sciences participants seemed to disdain the practical and vocational mission of professional school faculty members, who are sometimes perceived as merely turning out "the next robot." Even after their seminar experiences, some believed that interdisciplinary discourse should be limited to arts and sciences faculty who presumably engage in a search for common principles of knowledge unburdened by the need to gather external funding or produce graduates to fill certain vocational needs. Yet, the desire to participate in the large academic questions as part of a community of scholars emerged as a strong theme among professional school participants. These faculty members appeared to delight in opportunities to both engage in theoretical and abstract intellectual discourse and to signal their capability to successfully participate in such discourse. Our data seem to support Bok's (1986) observation that professional school faculty can feel isolated from the "true scholarship" of the arts and sciences and that, within academic culture, knowledge that is theoretical, abstract, or valuable for its own sake remains the dominant model.

Becher's (1995) distinction between the internal and external status hierarchy among disciplines may help account for the tensions between arts and sciences and professional school faculty. While the "non-instrumental" and theoretical knowledge fields among the arts and sciences may rank higher in the internal intellectual status hierarchy of academia, the professional school disciplines seem to outrank them in the external hierarchy of perceptions outside of academia. Our data seem to confirm the disdain felt by some arts and sciences faculty members for the impurity of the professional school mission. As some have observed, professional schools increasingly gain external reward and recognition while the arts and sciences perceive themselves increasingly under threat for external justification (Bender, 1998; Geiger, 1986, 1993). We also observed some evidence of envy within professional school disciplines for greater internal intellectual acceptance within the academy. Perhaps some

professional school faculty members sense an exclusionary attitude toward them from the arts and sciences.

Our data thus suggest the existence of some strong disciplinary biases among faculty members that we did not anticipate. The intensity of biases may reflect perceptions of status hierarchies subject to group boundary maintenance strategies (Douglas, 1966; Erickson, 1966; Lamont and Fournier, 1992). When groups experience boundary threats, they tend to increase the intensity of their defenses. Among the participants we interviewed, boundary defenses appeared most prominent in epistemological debates between the realist and relativist views and among some faculty members in the arts and sciences who may resent the external status of the professional school disciplines while decrying the nature of their scholarship. Following Douglas (1966), some arts and sciences faculty members appear to display concern for maintaining the intellectual "purity" of their scholarship in the face of the perceived threat from professional school disciplines concerned with practical and vocational research tied more closely to external reward and access to resources. In turn, professional school faculty members may sense this disdain and seek to legitimize their disciplinary orientations throughout the academy. Similarly, the tenuous sense of the foundations of epistemological approaches may elicit strong posturing in order to maintain their legitimacy. Although the Luce Seminars often minimized the negative effect of these types of defenses, the existence of such boundary mechanisms may help account for varying influences of interdisciplinary discourse on subsequent faculty interaction and scholarship.

Conclusion

As the demand for specialized knowledge continues to grow, colleges and universities seek ways to connect disparate fields of knowledge while supporting scholarly expertise. Developing a framework for serious intellectual discourse across disciplines represents one solution. For the faculty members who participated, the Luce Seminars helped build a more coherent intellectual community while enhancing the quality of scholarship.

The influences of the seminar series seemed to result from a confluence of distinct intellectual, affective, and symbolic characteristics. Participants seemed to view their seminar both as an intellectual model of interdisciplinary discourse and as sign of the university's commitment to provide a sanctuary for the exploration of knowledge apart from the expected or routine functions of the departments. Such an opportunity helped respect, understanding, and appreciation across disciplines to flourish. The program also tapped into powerful affective and symbolic aspects of faculty culture that, in turn, motivated faculty to engage in new forms of scholarship. Our study revealed the importance of cultivating the affective and symbolic as well as the intellectual dimensions of faculty culture. Thus, intellectual community seems to involve more than opportunities for faculty interaction. It also concerns a scholar's attitudes and perceptions related to the various disciplinary perspectives of colleagues and the ways that these perspectives fit into scholarly inquiry, as well as the relationship between faculty members and their college or university.

Several questions related to the potential influences of similar programs at Emory and other research universities emerge from this study. First, our data revealed the program's profound influence on attitudes and behaviors related to intellectual exchange and scholarly vitality that continued subsequent to participation. Over the long run, how lasting might these influences be? What institutional and professional factors might support or erode the program's

influence over time? Based on our data, we will begin to address these questions in a forthcoming analysis of faculty attitudes related to both cultural and structural factors that help promote or constrain faculty interaction and scholarship across disciplines at the university.

Second, despite the general success of the program in bridging the distances between disciplines, some powerful cultural fault lines seem to remain. These fault lines revolve around two tensions regarding modes of scholarly inquiry. The first tension concerns the realist or empirical approach characteristic of the natural and some social sciences and the relativist or social-construction approach found in some humanities and social sciences. The second tension involves the "practical" or applied nature of professional school scholarship and the theoretical or "pure" nature of scholarship often found in the arts and sciences. To what extent must these cultural fault lines remain as barriers to intellectual interaction and scholarship across disciplines? What factors contribute to the internal and external status hierarchies among disciplines and disciplinary groups, and what factors might mitigate them? How can the hierarchies become complementary rather than competing forces?

Third, although the program seemed to connect distinct elements of faculty cultures, new disciplines and sub-disciplines continue to multiply at this university. Assuming that other universities share this condition, to what extent can institutions support a coherent intellectual community and at the same time advance disciplinary expertise? What are the advantages of such coherence? Our case study analysis has revealed some potential benefits for one subset of faculty members at one research university. That some faculty members may have participated in the Luce Seminars with a predisposition for interdisciplinary intellectual exchange suggests the need for more wide-ranging data. Future research should investigate where and how faculty members seek to locate intellectual community across departments of a school, schools of a university, and universities in the United States and the world.

Our analysis has revealed some ways to better understand the potential influences of programs aimed at enhancing scholarly interaction across disciplines, particularly for research universities. Future research should address the ways structural and cultural factors shape different types of intellectual interaction and the consequences for the quality of scholarship. Helping to bridge the distances between disciplines could both strengthen intellectual community and enable scholarship to better address increasingly complex problems in society.

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